

NOTES ON FISHES OF THE GENUS *GLYPTOTHORAX* BLYTH
FROM PENINSULAR INDIA, WITH DESCRIPTION OF A
NEW SPECIES

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(Communicated by Dr. S. L. HORA)

In determining the systematic position of *Bagrus lonah* Sykes and other glyptosternoid fishes from Deccan, Hora (1938) recognised five species of *Glyptothorax* as occurring in Peninsular India. In addition to the three previously known species, viz., *G. madraspatanus* (Day), *G. lonah* (Sykes) and *G. annandalei* Hora, he figured and described a new species, *G. trawavasae* from the Kistna watershed and a subspecies, *G. conirostre* var. *poonaensis* from the waterways near Poona. After studying the type of Günther's *G. dekkanensis* in comparison with *G. lonah* (Sykes), he found that both were conspecific and stated:

'The differences in proportions of the various parts noted by Günther, seem to fall within the range of individual variation, especially as the two types are of very different sizes and are also in different states of preservation.'

Hence *G. dekkanensis* Günther was treated as a synonym of *G. lonah* (Sykes). Speaking of *G. annandalei*, Hora observed:

'I am of the opinion that *G. annandalei* Hora, with a much longer and narrower caudal peduncle, probably represents a torrential race of *G. lonah* (Sykes), but in the present state of our knowledge it may be retained for the time being at least as a separate species.'

After examining a number of specimens of *G. lonah* and *G. annandalei*, in the collection of the Zoological Survey of India, Indian Museum, I think, that it is best to consider these two forms as two distinct species. Moreover, *G. annandalei* can be easily distinguished from *G. lonah* by its more slender caudal peduncle and its colouration.

Herre in 1941 described a new species of *Glyptothorax*, viz. *G. housei*, from the Anamalai Hills in South India, and distinguished his species from *G. conirostre* var. *poonaensis* Hora (which form it resembles in its smooth skin) by the following remarks:

'*Glyptothorax housei* is separated from the above species (meaning *G. conirostre poonaensis* Hora), by the longer barbels, especially the maxillary and nasal ones; the size and lesser height of the dorsal and its greater distance from the adipose fin; the size and position of the anal; the shorter head; and the greater development of adhesive organs.'

In a recent contribution (Silas, 1951), remarks were made on two specimens of *Glyptothorax* from the Anamalai Hills in South India. The specimens were provisionally assigned to *G. madraspatanus* (Day), but it was also noted that, 'They differ considerably from *G. madraspatanus* found in Travancore Hills. . . . It is possible that

they indicate an incipient stage in the formation of a new species.' Recently, however, after examining the South Indian representatives of the genus, I am of the opinion, that the specimens described as *G. prox. madraspatanus* and which differ considerably from *G. madraspatanus* (Day), warrant a distinct specific status and as such are christened here as *G. anamalaiensis*, sp. nov.

Thus at present seven species of *Glyptothorax* can be recognised from Peninsular India, viz. *G. lonah* (Sykes), *G. amandalei* Hora, *G. conirostre* var. *poonaensis* Hora, *G. trawavasae* Hora, *G. madraspatanus* (Day), *G. housei* Herre, and *G. anamalaiensis*, sp. nov. Synoptic key for the identification of the above species is give below. To facilitate reference in future, the diagnostic characters of *G. housei* Herre and *G. anamalaiensis*, sp. nov., are given in detail.

KEY TO THE SPECIES OF THE GENUS *GLYPTOTHORAX* BLYTH FROM
PENINSULAR INDIA

- I. Skin on head and body smooth.
- A. Nasal barbel extends beyond eye; maxillary barbels extend for some distance beyond upper angle of gill opening; dorsal origin much closer to tip of snout than to commencement of adipose fin; least depth of caudal peduncle contained $2\frac{1}{2}$ times in its length. ... *G. housei* Herre
- B. Nasal barbel falls much short of anterior margin of eyes; maxillary barbels barely reach upper angle of gill opening; dorsal origin almost midway between tip of snout and origin of adipose fin; least depth of caudal peduncle contained 2 times in its length. ... *G. conirostre* var. *poonaensis* Hora¹
- II. Skin on head and body minutely or coarsely tuberculated.
- A. Pectoral spine almost as long as head, or somewhat longer; dorsal spine strong and serrated near apex on both edges. ... *G. madraspatanus* (Day)²
- B. Pectoral spine not as long as head, generally much shorter; dorsal spine moderately developed and smooth throughout. ...

¹ For a complete diagnosis of this species reference may be made to: Hora, S. L., *Rec. Ind. Mus.*, XL, p. 368 (1938).

² Day, F., *Fishes of India*. p. 498 (1877).

1. Maxillary barbels extending beyond commencement of pectorals.
- (a) Skin minutely tuberculated; colour pattern arranged longitudinally.
- i. Caudal peduncle about $1\frac{1}{2}$ times as long as deep. A light streak along lateral line. Fins with darker bases and lighter margins. *G. lonah* (Sykes)¹.
- ii. Caudal peduncle $2\frac{1}{4}$ to $2\frac{1}{2}$ times as long as deep. Three light streaks along body, one dorsally and two laterally. Fins with lighter margins. ... *G. amandalei* Hora².
- (b) Skin coarsely granulated; colour pattern arranged transversely. (Body greyish with two broad white transverse bands; one below dorsal, a second beneath adipose and a third narrow white band at base of caudal fin. A broad transverse white band present at bifurcation of caudal. All fins tipped with white). ... *G. anamalaiensis*, sp. nov.
2. Maxillary barbels barely reach base of pectoral fin. ... *G. trawavasae* Hora³.

***Glyptothorax housei* Herre.**

1941, *Glyptothorax housei* Herre, *Stanford Ichth. Bull.*, II, (4), pp. 177-178, fig. 1.

To facilitate reference in future, a synopsis of the species based on Herre's description is given below.

D. 1/5; A. 2/10; P. 1/9.

Head 3.9 to 4.1 and depth of body 6.2 to 6.4 in standard length. Skin on head and body smooth. Head longer than broad; eyes situated in middle of head. Maxillary barbels reach beyond commencement of pectorals. Nasal barbels extend to middle or beyond eye. Labial groove widely interrupted. Thoracic adhesive apparatus well developed and longer than head. Pectoral spine strongly serrated internally, and possessing a few serrations on the outer side. Pelvics extend beyond anus, but are separated from anal fin by a considerable distance. Least depth of the caudal peduncle is about $1\frac{1}{2}$ times in its length. Caudal fin deeply forked; its lower lobe the larger. In life the colour is reddish, pinkish or flesh colour with yellow or dusky mottling above, and flesh colour below. In spirit the

¹ Hora, S. L., *Rec. Ind. Mus.*, XL, p. 371 (1938).

² Hora, S. L., *Rec. Ind. Mus.*, XXV, p. 14 (1923).

³ Hora, S. L., *Rec. Ind. Mus.*, XL, p. 373 (1938).

general colour is blackish, with darker fin bases and lighter margins. Under surface of body paler.

Habitat.—Puthutotam Estate, Anamalai Hills, South India.

Glyptothorax anamalaiensis, sp. nov.

1951, *Glyptothorax* prox. *madraspatanus*, Silas, *Journ. Bombay Nat. Hist. Soc.*, XLIX, (4) pp. 676-677, Pl. I. figs. 1-3.

D. 1/6; A. 3/6/1; P. 1/8; V. 6; C. 17.

Head contained 4 times and depth of body $6\frac{1}{2}$ times in standard length. Skin on head and body coarsely tuberculated. Nasal barbels do not extend as far as eye. Maxillary barbels extend beyond commencement of pectorals. Thoracic adhesive apparatus is feebly developed and is about as long as broad. Least height of caudal peduncle is contained about $2\frac{1}{2}$ to 3 times in its length. Origin of rayed dorsal closer to commencement of adipose fin, than to tip of snout. Pectorals shorter than head and separated from pelvics by a considerable distance. Pelvics overlap anus, but fall much short of anal fin. Pectoral spine pectinated internally. Caudal fin deeply forked. The characteristic colouration of the species has been given in the key on page 369.

Holotype.—No. F. 629/2 and Co-type No. F. 630/2, Preserved in the collection of the Zoological Survey of India.

Habitat.—Streams at the base of the Anamalai Hills, South India.

Remarks.—In its coarsely tuberculated skin *G. anamalaiensis* differs from *G. housei* and *G. conirostre* var. *poonaensis*. The smooth dorsal spine, the less extensive paired fins and the general colour pattern easily distinguishes the new species from *G. madraspatanus*. From *G. lonah* and *G. annandalei* it can be easily separated by the general form of the body, the coarsely tuberculated skin and the colour pattern. The length of the maxillary barbels which is a diagnostic character, differentiates *G. travavasa* and *G. anamalaiensis*.

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